



COMDTINST 3120.13
6 SEP 1989

COMMANDANT INSTRUCTION 3120.13

Subj: Shipboard Helicopter Operations Facility Certification Program

1. PURPOSE. This instruction implements Coast Guard participation in a joint Navy/Coast Guard certification program for ship-helo operations facilities (aviation facilities) sponsored by Commandant (G-O) and Commander, Naval Air Systems Command.
2. DISCUSSION.
 - a. Adoption of Navy air capable ship certification requirements brings the following benefits to the Coast Guard:
 - (1) Enhanced safety and effectiveness of Coast Guard ship-helicopter operations resulting from standardization of shipboard aviation facilities on all classes of air capable Coast Guard cutters.
 - (2) Incorporation of all certification requirements into a single volume, Naval Air Engineering Center Air Capable Ship Aviation Facilities Bulletin No. 1 (series).
 - (3) Facilitated joint services defense and law enforcement operations aboard air capable Coast Guard cutters.
 - (4) Continuity for aviation facility design in future Coast Guard vessel construction.
 - (5) Ready access to advancements made through Navy research and development in aviation facility design and equipment.
 - b. Coast Guard participation in this program involves the following:
 - (1) Definition of Operation Requirements: OPNAVINST 3120.35 (series) (Subj: Aviation Operational Requirements for Air Capable Ships), distributed to Coast Guard units as Appendix A to the Shipboard Aviation Facilities Resume (NAEC-ENG-7576), is being amended to include the levels and classes of certification required to support operation of Coast Guard, Navy, and other

2. b. (1) Department of Defense helicopters aboard our cutters. The revision will also address certification of Navy ships for operations with Coast Guard helicopters.
- (2) Consolidation of Material Standards: Standards which are peculiar to the Coast Guard are being incorporated into Air Capable Ship Aviation Facilities Bulletin No. 1 (NAVAIRENGCEN 91122), to make that document a comprehensive source for specific requirements and inspection procedures applicable to aviation capable Coast Guard cutters.
- (3) Institution of Joint Inspections: The existing aviation facility certification inspections conducted by the Naval Air Engineering Center are being combined with Phase I Certification Visits conducted by the Aviation Training Center Ship-Helo Branch into a single inspection to be conducted upon initial commissioning of an aviation capable cutter and every three years thereafter.
3. ADOPTION OF STANDARDS. Effective immediately, the aviation facilities aboard aviation capable cutters shall conform to the requirements set forth in OPNAVINST 3120.35 (series) and Air Capable Ship Aviation facilities Bulletin No. 1 (series), as amended for Coast Guard use.
 - a. Enclosure (1) lists the required levels and classes of certification for operation of Coast Guard, Navy, and other DOD helicopters aboard cutters. These requirements will be incorporated into the next revision of OPNAVINST 3120.35 (series).
 - b. Enclosure (2) is a list of standards, specifically for Coast Guard cutters, that will be incorporated into Air Capable Ship Aviation Facilities Bulletin No. 1.
 - c. A joint service aviation facility inspection handbook will be distributed in the near future.
4. WAIVERS. Numerous aviation facility modifications are required for certification of WHEC 378, WMEC 210, and WAGB class cutters under this program.
 - a. The majority of modifications required for WHEC 378 and WMEC 210 cutters are being accomplished through FRAM and MMA, respectively. The remaining modifications will be completed by the ship alteration (ShipAlt) process.
 - b. All modifications required to make WAGB class cutters certifiable will be completed by future ShipAlts.
 - c. In the interim, the blanket waivers contained in enclosure (3) are provided to make operations possible, for Coast Guard helicopters only, without the need for case-by-case waivers. The waivers are effective immediately, and shall remain in effect for the indicated duration. These waivers are not intended to supersede any other waiver requirements contained in NWP-42 and COMDTINST M3710.2.

5. ACTION.

- a. The Commandant will:
 - (1) Fund, develop, and publish ShipAlt necessary for flight facility certification under the criteria specified by this instruction.
 - (2) Maintain liaison with Commander, Naval Air Systems Command to participate in the continued development of certification requirements.
- b. Area commanders shall:
 - (1) Schedule aviation capable cutters under their control for maintenance availability periods, to correct deficiencies noted in enclosure (3) and not corrected by FRAM/MMA. Corrective action shall be taken prior to the deadline noted for each waiver.
 - (2) Maintain liaison with Commanding Officer, Naval Air Engineering Center and Commanding Officer, Aviation Training Center. Schedule aviation capable cutters under their control for flight facility certification inspections required for this program.
- c. Commanders of maintenance and logistic commands shall execute the Shipalts developed to correct deficiencies, noted in enclosure (3), affecting cutter flight facility certification. Corrective action shall be taken prior to the deadline noted for each waiver.
- d. Commanding officers of aviation capable cutters shall comply with the certification requirements of this program.

A. BRUCE BEAN
Chief of Staff

- Enc: (1) Certification Requirements for USCG Cutters
(2) USCG Changes to Air Capable Ship Aviation Facilities Bulletin No. 1
(3) Certification Requirements Waivers

FLIGHT OPERATIONS CERTIFICATION REQUIREMENTS FOR USCG CUTTERS

WAGB 400 Class-Level I

Notes: 8 (H-65 only), 13; flight deck slopes -3 degrees

- | | | |
|----|------------|---|
| a. | C1 1 | USGC H65 |
| b. | C1 2A | USN/USMC H1, H2, H3
USCG H3E, H3F
USA H1, H6A, H58
USAF H1, H3 |
| c. | C1 4, Ty 2 | USN/USMC H1, H2, H3, H46, H60B
USCG H3E, H3F, H65
USA H1, H47, H54, H60A
USAF H1, H3E, H53, H60D |
| d. | C1 6 | USN/USMC H2, H3, H46, H53, H53E, H60B
USCG H65 |

WHEC 378 Class (pre-Fram) - Level II

Notes: 11, 13

- | | | |
|----|------------|--------------------|
| a. | C1 2A | USCG H65 |
| b. | C1 4, Ty 2 | USCG H3E, H3F, H65 |

Level III

- | | | |
|----|-----------|---|
| a. | C1 2A | USN/USMC H1, H2
USA H1, H6A, H58
USAF H1 |
| b. | C1 4, Ty2 | USN/USMC H1, H2
USA H1, H47, H60A
USAF H1, H3, H60D |
| c. | C1 6 | USN/USMC H2, H3, H46, H53, H53E, H60B
USCG H65 |

WHEC 378 Class (FRAM) - Level I

Notes: HR, 11, 13

- | | | |
|----|------------|--|
| a. | C1 1 | USN H2
USCG H65 |
| b. | C1 2 | USN/USMC H1
USA H1, H6A, H58
USAF H1 |
| c. | C1 4, Ty 2 | USN/USMC H1, H2, H3, H46, H60B
USCG H3E, H3F, H65
USA H1, H47, H60A
USAF H1, H60D |
| d. | C1 6 | USN/USMC H2, H3, H46, H53, H53E, H60BUSCG H65 |

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WHEC 378 Class (CIWS/Harpoon equipped) - Level I

Notes: HR, 11, 14

- a. C1 1 USN H2
USCG H65
USN/USMC H1
USA H1, H6A, H58
USAF H1
- c. C1 4, Ty 2 USN/USMC H1, H2, H3, H46, H60B
USCG H3E, H3F, H65
USA H1, H47, H60A
USAF H1, H60D
- d. C1 6 USN/USMC H2, H3, H46, H53, H53E, H60B
USCG H65

WMEC 270 Class - Level I

Notes: HR, 11, 13

- a. C1 1 USN H2
USCG H65
- b. C1 2 USN/USMC H1
USA H1
- c. C1 2A USN H60B (except WMEC 901-904), H3
USCG H3E, H3F
USAF H1, H3
- d. C1 4, Ty 2 USN/USMC H1, H2, H3, H46, H60B
USCG H3E, H3F, H65
USA H1, H47, H60A
USAF H1, H3, H60D
- e. C1 6 USN/USMC H2, H3, H46, H53, H53E, H60B
USCG H65

WHEC 210 Class (pre-MMA) - Level II

Notes: 6, 11, 13

- a. C1 2A USCG H65
- b. C1 4, Ty 2 USCG H65
- c. C1 6 USCG H65

Level III

- a. C1 2 USN/USMC H1
USA H1
USAF H1
- b. C1 4, Ty 2 USN/USMC H1, H2, H60B
USA H1, H60A
USAF H1, H60D
- c. C1 6 USN/USMC H2, H60B

WHEC 210 Class (MMA) - Level II

- a. C1 2 USCG H65
- b. C1 4, Ty 2 USN/USMC H1, H2, H60B
USCG H65
USA H1, H60A
USAF H1, H60D

Level III

- a. C1 6 USN/USMC H2, H60B
USCG H65

CERTIFICATION LEVELS AND CLASSES

- Level I: Day and night, IMC operations.
Level II: Day and night, VMC operations.
Level III: Day only, VMC operations.

- Class 1: Landing area with service and maintenance facilities.
Class 2: Landing area with service facilities.
Class 2A: Landing area with limited service facilities.
Class 3: Landing area without support facilities.
Class 4: VERTREP area, hover height in excess of 5 feet.
Class 5: VERTREP area, hover height in excess of 15 feet.
Class 6: HIFR area.

NOTES AND ABBREVIATIONS

The following notes and abbreviations are as listed in OPNAVINST 3120.35 (series) and which apply to Coast Guard Cutters:

- Note 6: Without stabilized glide slope indicator (SGSI).
Note 8: Dual helicopter deployment.
Note 11: Single helicopter deployment only.
Note 13: Ship centerline landing.
Note 14: Oblique landing line-up lines.
- HR: Hanger retracted.

**COAST GUARD ITEMS FOR INCORPORATION INTO
AIR CAPABLE SHIP AVIATION FACILITIES BULLETIN No. 1 (series)**

References:

- (o) U.S. Coast Guard Aviation allowance Equipage List (AEL) for Cutters
- (p) Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2

11. MATERIAL ALLOWANCES SUPPORTING CERTIFICATION:

For Coast Guard cutters, reference (o) is the primary AEL supporting certification. It is maintained by Commandant (G-O) based on recommendations from Ship-Helo Branch, Coast Guard ATC Mobile.

12.1.1 LANDING AREA MARKING:

On Coast Guard cutters, only epoxy roll-on nonslip compound rated in "GOOD" or "FAIR" condition as defined in reference (p) is acceptable for certification. It shall be applied over the flight deck area up to the adjacent superstructure, as well as all aircraft traversing, hangar and parking areas.

12.5.11 DECK SURFACE FLOODLIGHTS:

On Coast Guard cutters, deck surface floodlights shall have red filters installed.

12.5.13 MAINTENANCE FLOODLIGHTS:

For all Level I and II operations on existing Coast Guard cutters which do not have installed hangar/structure wash floodlights, maintenance floodlights fitted with yellow filters shall be installed for illumination of the hangar/structure during flight operations.

15.2 DECK/BULKHEAD FITTINGS:

On ships designated for HH-65A operations, raised cloverleaf fittings are not permitted within eight feet either side of the landing line-up line aft of the landing circle.

16.1 HELICOPTER CONTROL STATION (HCS):

On Coast Guard cutters, the HCS shall be located in the pilothouse. Low light level closed circuit television (CCTV) cameras shall be utilized to satisfy the HCS clear view requirement, and shall be required for certification.

16.5 SUPPLEMENTAL EQUIPMENT:

On Coast Guard cutters, bubble-type inclinometers shall be provided for use in determining pitch, roll, and list.

16.6 LOW-LIGHT LEVEL CLOSED CIRCUIT TELEVISION:

On Coast Guard cutters, a low-light level closed circuit television (CCTV) system consisting of two cameras, one pan-tilt mechanism, and associated

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monitor(s) and remote controls shall be used to provide a clear view of the flight deck, approach, and departure zones at the Helicopter Control Station (HSC) in the pilothouse. The CCTV system shall conform to the following standards:

- a. The cameras shall be the RCA model TC1036/HZ2 or equivalent.
- b. The first camera shall be mounted on a pan-tilt mechanism (RCA model V353APTV or equivalent) attached to the hangar or overhead structure forward of the flight deck 15-25 feet above deck. This camera shall be installed in such a manner that, with use of the zoom, pan, and tilt features, the camera can provide a clear, unobstructed view of the entire flight deck aft of the forward peripheral line, as well as the helicopter approach path from 1/4 mile aft of the ship, and the helicopter departure zone directly abeam and on either side of the forward peripheral line.
- c. The second camera shall have its lens fixed at a wide-angle setting and shall be mounted directly on the port or starboard exterior hangar or superstructure side buldhead 8-10 feet above deck. This camera shall be installed in such a manner that, without use of zoom, pan, or tilt featrues, the camera can provide a clear, unobstructed view of the entire flight deck area within the peripheral lines, as well as the LSO positioned at normal flight quarters stations.
- d. The HCO station in the pilothouse shall be equipped with suitable CCTV monitor(s) and remote controls positioned in such a manner that they can be easily viewed and operated by the HCO while performing any duties directly involved with controlling helicopter operations. The monitor shall be linked to a recording device with a date/time feature.

19.1.1 FOAM OUTLETS:

On Coast Guard cutters, three foam outlets shall be provided.

- a. Two (one located on the port side and one on the starboard side) shall be permanently piped to the installed foam station. With the AFFF proportioner energized, the maximum delay for foam reaching the nozzle shall be 30 seconds from the time the nozzle is opened.
- b. The third (located on the port side) shall consist of a portable foam station. The AFFF concentrate required of this station may be stored in adjacent racks or brought to the station from other areas of the cutter. In the latter case, the cutter's Helicopter Operations Bill shall specify prodecures to ensure that the foam station is stocked with the required amount of concentrate prior to commencement of helicopter operations.

22.1 FUEL STORAGE AND REFUELING:

On Coast Guard cutters the JP-5 fuel system shall additionally be capable of being aligned as follows:

- a. Fuel in the storage tanks shall have the capability of being recirculated from each tank through the transfer pump, through the transfer filter-separator and back to the same tank.

b. Fuel in the service tank shall have the capability of being recirculated from the tank through the service pump, through the service filter=separator and back to the tank.

c. A GO-NO-GO fuel monitor with filter elements meeting MIL-M-8130C(AS), a flow rating at least equal to that of the service pump, and the means of measuring the inlet-outlet pressure differential, shall be installed in the piping between the service filter-separator and the fuel house. Installation shall be as close as possible to the fuel hose.

22.2 ELECTRICAL POWER (28-VOLT DC):

For Level I and II certification for the HH-65A, the 28-volt DC systems shall also be capable of starting and servicing the HH-65A helicopter.

22.5.1 HH-65A ENGINE FRESH WATER WASH CAPABILITY:

Engine fresh water wash capability is required for Class 1 and 2 certification for the HH-65A. The minimum capability required is 45-55 psi at a flow rate of 4-5 gpm sustainable for at least 2 minutes.

FIGURE 4 OBSTRUCTION CLEARANCE CRITERIA:

NOTE 2b. For HH-65A: raised deck hardware is not permitted within eight feet either side of the landing line-up line aft of the landing circle.

NOTE 4. For Coast Guard cutters operating with H-65: The minimum forward clearance distance shall be equal to the distance between the center of the touchdown circle and the forward-most extremity of the main rotor plus 10 feet.

**JOINT NAVY/COAST GUARD SHIPBOARD HELICOPTER OPERATIONS FACILITY
CERTIFICATION REQUIREMENTS WAIVERS**

WAGB 400:

- 12.5.1 CONTROL SYSTEM: Waiver granted to operate with existing flight deck lighting control system located at HCS in pilothouse. EXPIRES 2 OCT 92.
- 12.5.5 LINEUP LIGHTS, DECK INSTALLED (WHITE): Waiver granted to operate without installed lights. EXPIRES 2 OCT 92.
- 15.2 DECK/BULLHEAD FITTINGS: Waiver granted to operate HH-65A with existing hangar deck fittings. EXPIRES 2 OCT 92.
- 16.1 HELICOPTER CONTROL STATION: Waiver granted to operate without low light level closed circuit television system. EXPIRES 17 OCT 91.
- 20.1 DECK EDGE PROTECTION: Waiver to operate with existing deck edge catwalks/nets (gaps in excess of eight inches). EXPIRES 17 JAN 92.
- 22.1 FUEL STORAGE AND REFUELING: Waiver granted to operate with existing GO-NO-GO monitor installation which lacks the capability to measure inlet-outlet differential pressure. EXPIRES 1 SEP 91.
- 22.2 ELECTRICAL POWER (28-VOLT DC): Waiver granted to operate with currently installed and configured DC helicopter start rectifier. EXPIRES 1 JAN 92.

WHEC 378 (pre-FRAM):

- 12.5.1 CONTROL SYSTEM: Waiver granted to operate with existing flight deck lighting control system. EXPIRES UPON COMPLETION OF FRAM.
- 12.5.3 EDGE LIGHTS (RED): Waiver granted to operate without installed edge lights. EXPIRES UPON COMPLETION OF FRAM.
- 12.5.5 LINEUP LIGHTS, DECK INSTALLED (WHITE): Waiver granted to operate without installed lights. EXPIRES UPON COMPLETION OF FRAM.
- 15.2 DECK/BULKHEAD FITTINGS: Waiver granted to operate with existing deck fittings. EXPIRES UPON COMPLETION OF FRAM.
- 16.1 HELICOPTER CONTROL STATION: Waiver granted to operate with the existing flight deck closed circuit TV monitor configuration. EXPIRES UPON COMPLETION OF FRAM.
- 20.1 DECK EDGE PROTECTION: Waiver granted to operate with existing deck edge catwalks (no protection along aft deck edge and gaps between catwalks in excess of eight inches). EXPIRES UPON COMPLETION OF FRAM.

- 22.1 FUEL STORAGE AND REFUELING: Waiver granted to operate with existing GO-NO-GO monitor installation which lacks the capability to measure inlet-outlet differential pressure. EXPIRES 1 SEP 91.

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WHEC 378 (pre-FRAM):

- 22.1.2 SERVICE SYSTEM/EQUIPMENT (FUEL): Waiver granted to operate without pressure gauge installed at fueling station. EXPIRES UPON COMPLETION OF FRAM.
- 22.2 ELECTRICAL POWER (28-VOLT DC): Waiver granted to operate with currently installed and configured DC helicopter start rectifier. EXPIRES UPON COMPLETION OF FRAM.

WHEC 378 (FRAM):

- 22.1 FUEL STORAGE AND REFUELING: Waiver granted to operate with JP-5 fuel system which is incapable of recirculating fuel as specified in enclosure (2) to this instruction, but which meets all other certification criteria. This waiver does not release the cutter from the requirement to maintain JP-5 fuel to standards of quality specified in COMDTINST M3710.2. EXPIRES 2 DEC 91.
- 22.2 ELECTRICAL POWER (28-VOLT DC): Waiver granted to operate with currently installed and configured DC helicopter start rectifier. EXPIRES 1 JAN 92.

WMEC 210 (pre-MMA):

- 12.5.1 CONTROLL SYSTEM: Waiver granted to operate with existing flight deck lighting control system. EXPIRES UPON COMPLETION OF MMA.
- 12.5.3 EDGE LIGHTS (RED): Waiver granted to operate without installed edge lights. EXPIRES UPON COMPLETION OF MMA.
- 12.5.5 LINEUP LIGHTS, DECK INSTALLED (WHITE): Waiver granted to operate without installed lights. EXPIRES UPON COMPLETION OF MMA.
- 15.2 DECK/BULKHEAD FITTINGS: Waiver granted to operate with existing deck fittings. EXPIRES UPON COMPLETION OF MMA.
- 16.1 HELICOPTER CONTROL STATION: Waiver granted to operate without low light level closed circuit television system. EXPIRES UPON COMPLETION OF MMA.
- 20.1 DECK EDGE PROTECTION: Waiver granted to operate with existing deck edge catwalks (no protection along aft deck edge and gaps between catwalks in excess of eight inches). EXPIRES UPON COMPLETION OF MMA.
- 22.1 FUEL STORAGE AND REFUELING: Waiver granted to operate with existing GO-NO-GO monitor installation which lacks the capability to measure inlet-outlet differential impessure. EXPIRES 1 SEP 91.
- 22.1.2 SERVICE SYSTEM/EQUIPMENT (FUEL): Waiver granted to operate without pressure gauge installed at fueling station. EXPIRES UPON COMPLETION OF MMA.
- 22.1.2.2 CLASS 6 IN-FLIGHT REFUELING: Waiver granted to operate with currently installed JP-5 service pump which is incapable of maintaining the required pressure and flow rate. EXPIRES UPON COMPLETION OF MMA.

WMEC 210 (pre-MMA):

- 22.2 ELECTRICAL POWER (28-VOLT DC): Waiver granted to operate with currently installed and configured DC helicopter start rectifier. EXPIRES UPON COMPLETION OF MMA.

WMEC 210 (MMA):

- 20.1 DECK EDGE PROTECTION: Waiver granted to operate with existing deck edge catwalks (no protection along aft deck edge and gaps between catwalks in excess of eight inches). EXPIRES 16 NOV 91.

- 22.1 FUEL STORAGE AND REFUELING: Waiver granted to operate with JP-5 fuel system which is incapable of recirculating fuel as specified in enclosure (2) to this instruction, but which meets all other certification criteria. This waiver does not release the cutter from the requirement to maintain JP-5 fuel to standards of quality specified in COMDTINST M3710.2. EXPIRES 1 JAN 92.

- 22.1.2.2 CLASS 6 IN-FLIGHT REFUELING: Waiver granted to operate with currently installed JP-5 service pump which is incapable of maintaining the required pressure and flow rate. EXPIRES 16 DEC 91.

- 22.2 ELECTRICAL POWER (28-VOLT DC): Waiver granted to operate with currently installed and configured DC helicopter start rectifier. EXPIRES 1 JAN 92.